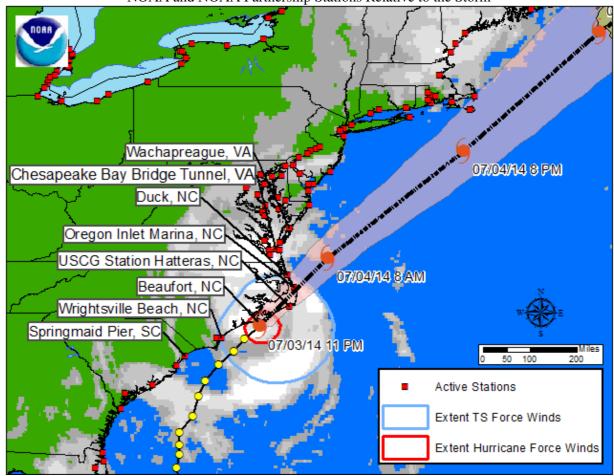


NOAA and NOAA Partnership Stations Relative to the Storm



Storm Analysis

As of 07/04/2014 00:00 EDT, water levels in Beaufort, NC are 2.4 feet above tidal predictions, while levels in Pamlico sound are at or near predictions. Water levels in South Carolina are closely following predictions. Wind speeds increased dramatically in North Carolina and are increasing in Virginia, ranging from 10 to 35 knots with higher gusts. Wind speeds up to 50 knots were recorded in Beaufort, NC, with gusts up to 60 knots. Barometric pressure is rapidly falling in Pamlico Sound.

Water Level and Meteorological plots available below are updated automatically. A line denoting <u>Mean Higher High Water</u> (MHHW) is displayed to provide an approximate indication of when flooding inundation may occur.

For additional data, please see the <u>Center for Operational Oceanographic Products & Services</u> website. For more information or archived products and reports, please see the <u>Storm QuickLook</u> Homepage.

Transaction With Total Gallon Edit Control (2011)
Analyst: TKM
SELECT NATIONAL HURRICANE CENTER ADVISORY INFORMATION:
HURRICANE ARTHUR ADVISORY NUMBER 13
1100 PM EDT THU JUL 03 2014
EYE OF ARTHUR ABOUT TO MAKE LANDFALL NEAR CAPE LOOKOUT
WATCHES AND WARNINGS
CHANGES WITH THIS ADVISORY
THE TROPICAL STORM WARNING HAS BEEN DISCONTINUED SOUTH OF CAPE FEAR.
ENVIRONMENT CANADA HAS ISSUED A TROPICAL STORM WATCH FOR THE COAST OF NEW BRUNSWICK FROM THE U.S./CANADA BORDER TO GRAND-ANSEALL OF NOVA SCOTIA INCLUDING CAPE BRETON ISLANDAND ALL OF PRINCE EDWARD ISLAND.
SUMMARY OF WATCHES AND WARNINGS IN EFFECT
A HURRICANE WARNING IS IN EFFECT FOR
* SURF CITY NORTH CAROLINA TO THE NORTH CAROLINA/VIRGINIA BORDER
* PAMLICO SOUND
* EASTERN ALREMARI E SOUND

- EASTERN ALBEMARLE SOUND
- A TROPICAL STORM WARNING IS IN EFFECT FOR...
- * CAPE FEAR TO SOUTH OF SURF CITY
- * THE NORTH CAROLINA/VIRGINIA BORDER TO CAPE CHARLES LIGHT
- VIRGINIA...INCLUDING THE MOUTH OF THE CHESAPEAKE BAY
- * WESTERN ALBEMARLE SOUND
- * NANTUCKET
- * CAPE COD FROM PROVINCETOWN TO CHATHAM
- A TROPICAL STORM WATCH IS IN EFFECT FOR...

- * NEW BRUNSWICK FROM THE U. S./CANADA BORDER TO GRAND-ANSE
- * ALL OF NOVA SCOTIA INCLUDING CAPE BRETON ISLAND
- * ALL OF PRINCE EDWARD ISLAND

A HURRICANE WARNING MEANS THAT HURRICANE CONDITIONS ARE EXPECTED SOMEWHERE WITHIN THE WARNING AREA. PREPARATIONS TO PROTECT LIFE AND PROPERTY SHOULD HAVE ALREADY BEEN COMPLETED.

A TROPICAL STORM WARNING MEANS THAT TROPICAL STORM CONDITIONS ARE EXPECTED SOMEWHERE WITHIN THE WARNING AREA.

INTERESTS ELSEWHERE IN COASTAL PORTIONS OF NEW ENGLAND...NEW BRUNSWICK...AND NEWFOUNDLAND SHOULD MONITOR THE PROGRESS OF ARTHUR.

FOR STORM INFORMATION SPECIFIC TO YOUR AREA IN THE UNITED STATES...INCLUDING POSSIBLE INLAND WATCHES AND WARNINGS...PLEASE MONITOR PRODUCTS ISSUED BY YOUR LOCAL NATIONAL WEATHER SERVICE FORECAST OFFICE. FOR STORM INFORMATION SPECIFIC TO YOUR AREA OUTSIDE THE UNITED STATES...PLEASE MONITOR PRODUCTS ISSUED BY YOUR NATIONAL METEOROLOGICAL SERVICE.

DISCUSSION AND 48-HOUR OUTLOOK

AT 1100 PM EDT...0300 UTC...THE CENTER OF HURRICANE ARTHUR WAS LOCATED NEAR LATITUDE 34.6 NORTH...LONGITUDE 76.6 WEST. ARTHUR IS MOVING TOWARD THE NORTHEAST NEAR 18 MPH...30 KM/H...AND THIS MOTION IS EXPECTED TO CONTINUE WITH AN INCREASE IN FORWARD SPEED DURING THE NEXT COUPLE OF DAYS. ON THE FORECAST TRACK...THE CENTER OF ARTHUR SHOULD PASS OVER THE COASTAL AREA OF EASTERN NORTH CAROLINA DURING THE NEXT SEVERAL HOURS...PASS SOUTHEAST OF NEW ENGLAND FRIDAY OR FRIDAY NIGHT...AND BE NEAR OR OVER WESTERN NOVA SCOTIA EARLY SATURDAY.

MAXIMUM SUSTAINED WINDS ARE NEAR 100 MPH...155 KM/H...WITH HIGHER GUSTS. LITTLE CHANGE IN STRENGTH IS EXPECTED TONIGHT. HOWEVER...ARTHUR IS EXPECTED TO BEGIN WEAKENING ON FRIDAY AND BECOME A POST-TROPICAL CYCLONE FRIDAY NIGHT OR SATURDAY.

HURRICANE FORCE WINDS EXTEND OUTWARD UP TO 40 MILES...65 KM...FROM THE CENTER...AND TROPICAL STORM FORCE WINDS EXTEND OUTWARD UP TO 150 MILES...240 KM. THE NOAA AUTOMATED STATION AT CAPE LOOKOUT NORTH CAROLINA RECENTLY REPORTED SUSTAINED WINDS OF 71 MPH...115 KM/H... AND A WIND GUST OF 84 MPH...135 KM/H.

THE MINIMUM CENTRAL PRESSURE BASED ON AIR FORCE RESERVE HURRICANE HUNTER AND BUOY DATA IS 976 MB...28.82 INCHES.

HAZARDS AFFECTING LAND

WIND...TROPICAL STORM CONDITIONS ARE SPREADING ACROSS PORTIONS OF THE NORTH CAROLINA/VIRGINIA WARNING AREA...AND SHOULD SPREAD NORTHWARD THROUGH THAT AREA DURING THE REMAINDER OF TONIGHT. HURRICANE CONDITIONS ARE CURRENTLY SPREADING ONTO THE COAST NEAR CAPE LOOKOUT...AND SHOULD SPREAD ACROSS OTHER PORTIONS OF THE HURRICANE WARNING AREA DURING THE NEXT FEW HOURS. TROPICAL STORM CONDITIONS ARE EXPECTED TO REACH THE NEW ENGLAND WARNING AREA BY FRIDAY NIGHT.

STORM SURGE...THE COMBINATION OF A DANGEROUS STORM SURGE AND THE TIDE WILL CAUSE NORMALLY DRY AREAS NEAR THE COAST TO BE FLOODED BY RISING WATERS. THE WATER COULD REACH THE FOLLOWING HEIGHTS ABOVE GROUND IF THE PEAK SURGE OCCURS AT THE TIME OF HIGH TIDE...

NORTH CAROLINA WITHIN THE HURRICANE WARNING AREA...3 TO 5 FT PAMLICO AND ALBEMARLE SOUNDS...2 TO 4 FT SOUTHERN NORTH CAROLINA WITHIN THE TROPICAL STORM WARNING AREA...1 TO 3 FT EXTREME SOUTHEASTERN VIRGINIA...1 TO 3 FT

COASTAL FLOODING IS ALSO POSSIBLE ALONG CAPE COD.

THE HIGHEST WATER WILL OCCUR ALONG THE IMMEDIATE COAST IN AREAS OF ONSHORE FLOW. THE SURGE WILL BE ACCOMPANIED BY LARGE AND DAMAGING WAVES. SURGE-RELATED FLOODING DEPENDS ON THE RELATIVE TIMING OF THE SURGE AND THE TIDAL CYCLE...AND CAN VARY GREATLY OVER SHORT DISTANCES. FOR INFORMATION SPECIFIC TO YOUR AREA...PLEASE SEE PRODUCTS ISSUED BY YOUR LOCAL NATIONAL WEATHER SERVICE OFFICE AND THE NEW EXPERIMENTAL POTENTIAL STORM SURGE FLOODING MAP FOR MORE DETAILS.

RAINFALL...RAINFALL ACCUMULATIONS OF 4 TO 6 INCHES...WITH ISOLATED MAXIMUM AMOUNTS OF 8 INCHES...ARE EXPECTED OVER COASTAL AREAS OF NORTH CAROLINA THROUGH FRIDAY. RAINFALL ACCUMULATIONS OF 2 TO 4 INCHES ARE EXPECTED OVER PORTIONS OF EASTERN MASSACHUSETTS AND RHODE ISLAND.

TORNADOES...ISOLATED TORNADOES ARE POSSIBLE OVER PORTIONS OF COASTAL NORTH CAROLINA AND SOUTHEASTERN VIRGINIA THROUGH FRIDAY MORNING.

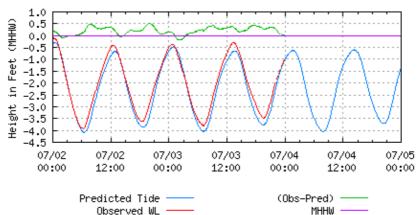
SURF...SWELLS GENERATED BY ARTHUR ARE AFFECTING AREAS ALONG THE COAST OF NORTH CAROLINA. THESE SWELLS ARE EXPECTED TO CAUSE LIFE-THREATENING SURF AND RIP CURRENTS. FOR MORE INFORMATION... PLEASE MONITOR PRODUCTS ISSUED BY YOUR LOCAL NATIONAL WEATHER SERVICE FORECAST OFFICE.

Forecaster Beven

For the purpose of timely release, data contained within this QuickLook have undergone a "limited" NOS Quality Assurance/Control; however, the data have not yet undergone final verification. All data subject to NOS verification.

Jump to: Wachapreague - Water Level, Wachapreague - Winds, Chesapeake Bay Bridge Tunnel - Water Level, Chesapeake Bay Bridge Tunnel - Winds, Duck - Water Level, Duck - Winds, Duck - Barometric, Duck - Air/Water Temp, Oregon Inlet Marina - Water Level, Oregon Inlet Marina - Winds, Oregon Inlet Marina - Barometric, Oregon Inlet Marina - Air/Water Temp, USCG Station Hatteras - Water Level, USCG Station Hatteras - Winds, USCG Station Hatteras - Barometric, USCG Station Hatteras - Air/Water Temp, Beaufort - Water Level, Beaufort - Winds, Beaufort - Barometric, Beaufort - Air/Water Temp, Wrightsville Beach - Winds, Wrightsville Beach - Barometric, Wrightsville Beach - Air/Water Temp, Springmaid Pier - Water Level, Springmaid Pier - Winds

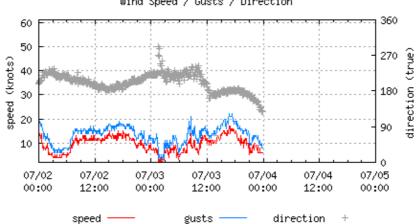
NOAA/NOS/CO-OPS <u>8631044 Wachapreague</u>, VA Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 07/04/2014 00:00 (EDT). Data relative to MHHW Observed: -0.94 ft. Predicted: -1.00 ft. Residual: 0.06 ft.

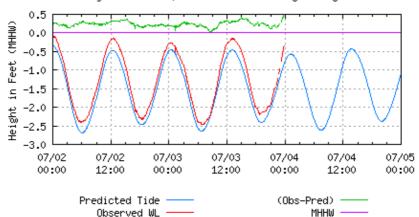
Historical Maximum Water Level: Feb 5 1998, 4.41 ft. Next High Tide: 07/04/2014 01:39 (EDT), -0.63 ft.

NOAA/NOS/CO-OPS <u>8631044 Wachapreague</u>, VA Wind Speed / Gusts / Direction



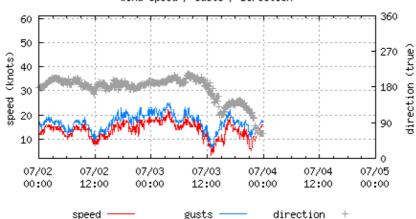
Last Observed Sample: 07/04/2014 00:00 (EDT) Wind Speed: 7 knots Gusts: 10 knots Direction: 124° T

NOAA/NOS/CO-OPS <u>8638863 Chesapeake Bay Bridge Tunnel, VA</u> Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 07/04/2014 00:00 (EDT). Data relative to MHHW Observed: -0.27 ft. Predicted: -0.76 ft. Residual: 0.49 ft. Historical Maximum Water Level: Nov 12 2009, 4.66 ft. Next High Tide: 07/04/2014 01:11 (EDT), -0.57 ft.

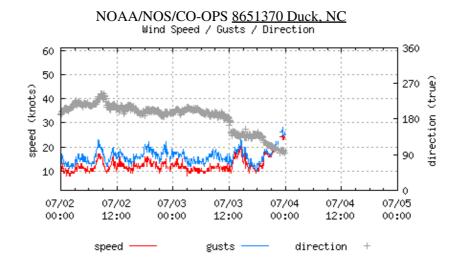
NOAA/NOS/CO-OPS <u>8638863 Chesapeake Bay Bridge Tunnel, VA</u> Wind Speed / Gusts / Direction



Last Observed Sample: 07/04/2014 00:00 (EDT) Wind Speed: 17 knots Gusts: 19 knots Direction: 62° T

NOAA/NOS/CO-OPS 8651370 Duck, NC Preliminary Water Level, relative to Mean Higher High Water(MHHW) 0.5 Height in Feet (MHHW) 0.0 -0.5 -1.0 -1.5 -2.0 -2.5 -3.0 -3.5 -4.0 07/03 07/03 07/04 07/05 07/02 07/02 07/04 00:00 12:00 00:00 12:00 00:00 12:00 00:00 Predicted Tide (Obs-Pred) Observed WL MHHW

Last Observed Sample: 07/04/2014 00:00 (EDT). Data relative to MHHW Observed: -0.35 ft. Predicted: -0.74 ft. Residual: 0.39 ft. Historical Maximum Water Level: Sep 18 2003, 4.13 ft. Next High Tide: 07/04/2014 00:19 (EDT), -0.72 ft.



Last Observed Sample: 07/04/2014 00:00 (EDT) Wind Speed: 21 knots Gusts: 25 knots Direction: 93° T

NOAA/NOS/CO-OPS <u>8651370 Duck, NC</u> Barometric Pressure

1016 1012 1008 Pressure (mb) 1004 1000 996 992 988 984 980 07/02 07/02 07/03 07/03 07/04 07/04 07/05 00:00 12:00 00:00 12:00 00:00 12:00 00:00

> barometric pressure —— Last Observed Sample: 07/04/2014 00:00 (EDT)

Barometric Pressure: 1008.7 mb

NOAA/NOS/CO-OPS 8651370 Duck, NC

Air / Water Temperature 85 Temperature (F) 80 75 65 60 07/02 07/02 07/03 07/03 07/04 07/04 07/05 00:00 12:00 00:00 12:00 00:00 12:00 00:00 water temp. air temp

> Last Observed Sample: 07/04/2014 00:00 (EDT) Water Temperature: 59.4° F Air Temperature: 74.5° F

NOAA/NOS/CO-OPS 8652587 Oregon Inlet Marina, NC Preliminary Water Level, relative to Mean Higher High Water(MHHW) 1.5 Height in Feet (MHHW) 1.0 0.5 0.0 -0.5 -1.507/02 07/03 07/04 07/05 07/02 07/03 07/04 00:00 12:00 00:00 12:00 00:00 12:00 00:00

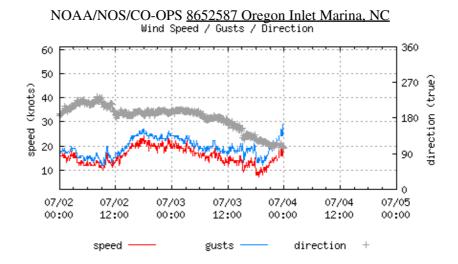
Last Observed Sample: 07/04/2014 00:00 (EDT). Data relative to MHHW Observed: -0.23 ft. Predicted: -0.24 ft. Residual: 0.01 ft. Historical Maximum Water Level: Aug 28 2011, 6.32 ft. Next High Tide: 07/04/2014 00:41 (EDT), -0.21 ft.

(Obs-Pred)

MHHW

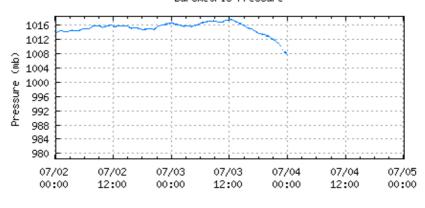
Predicted Tide

Observed WL



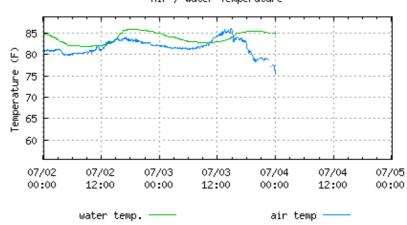
Last Observed Sample: 07/04/2014 00:00 (EDT) Wind Speed: 18 knots Gusts: 25 knots Direction: 104° T

NOAA/NOS/CO-OPS <u>8652587 Oregon Inlet Marina</u>, NC Barometric Pressure



barometric pressure ——
Last Observed Sample: 07/04/2014 00:00 (EDT)
Barometric Pressure: 1007.6 mb

NOAA/NOS/CO-OPS <u>8652587 Oregon Inlet Marina, NC</u> Air / Water Temperature



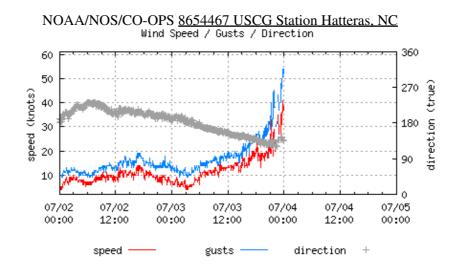
Last Observed Sample: 07/04/2014 00:00 (EDT) Water Temperature: 84.7° F Air Temperature: 75.7° F

NOAA/NOS/CO-OPS 8654467 USCG Station Hatteras, NC Preliminary Water Level, relative to Mean Higher High Water(MHHW) 1.0 Height in Feet (MHHW) 0.5 0.0 -0.5-1.0 -1.507/03 07/04 07/02 07/03 07/04 07/05 07/02 00:00 12:00 00:00 12:00 00:00 12:00 00:00 Predicted Tide (Obs-Pred)

Last Observed Sample: 07/04/2014 00:00 (EDT). Data relative to MHHW Observed: -1.42 ft. Predicted: -0.51 ft. Residual: -0.91 ft. Historical Maximum Water Level: Oct 29 2012, 4.15 ft. Next High Tide: 07/04/2014 02:39 (EDT), -0.45 ft.

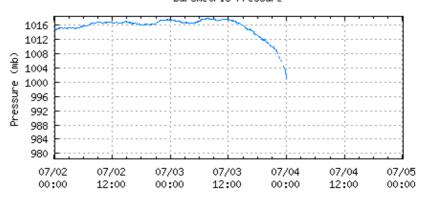
MHHW

Observed WL



Last Observed Sample: 07/04/2014 00:00 (EDT) Wind Speed: 38 knots Gusts: 52 knots Direction: 135° T

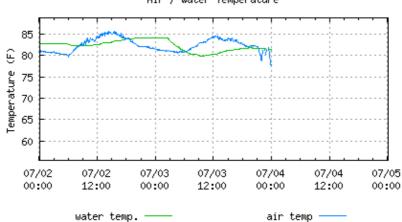
NOAA/NOS/CO-OPS <u>8654467 USCG Station Hatteras, NC</u> Barometric Pressure



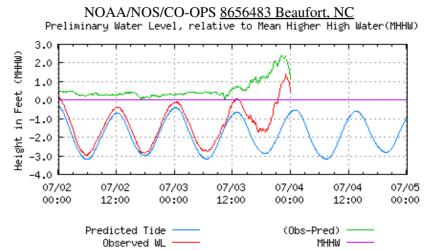
barometric pressure —— Last Observed Sample: 07/04/2014 00:00 (EDT)

Barometric Pressure: 1001.1 mb

NOAA/NOS/CO-OPS <u>8654467 USCG Station Hatteras</u>, NC Air / Water Temperature



Last Observed Sample: 07/04/2014 00:00 (EDT) Water Temperature: 81.3° F Air Temperature: 77.9° F



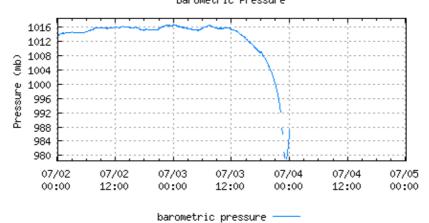
Last Observed Sample: 07/04/2014 00:00 (EDT). Data relative to MHHW Observed: 0.43 ft. Predicted: -0.66 ft. Residual: 1.09 ft. Historical Maximum Water Level: Sep 14 2005, 3.01 ft. Next High Tide: 07/04/2014 00:55 (EDT), -0.53 ft.

NOAA/NOS/CO-OPS 8656483 Beaufort, NC

	- ' '	' ' '				' ' '				
L		lbio dota	. t.ma ia	not ou	rea mathe					
F	This data type is not currently available from this station.									
F		avallal	ole from	ı tnıs st	ation.					
r										

Last Observed Sample: 07/04/2014 00:00 (EDT) Wind Speed: 37 knots Gusts: 50 knots Direction: 295° T

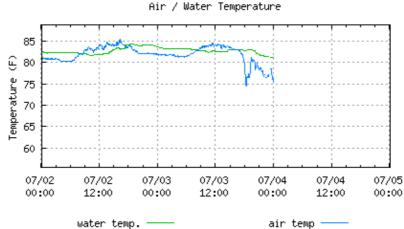
$\begin{array}{c} NOAA/NOS/CO\text{-}OPS \ \underline{8656483 \ Beaufort, NC} \\ \text{Barometric Pressure} \end{array}$



Last Observed Sample: 07/04/2014 00:00 (EDT)

Barometric Pressure: 987.1 mb

NOAA/NOS/CO-OPS <u>8656483 Beaufort</u>, NC



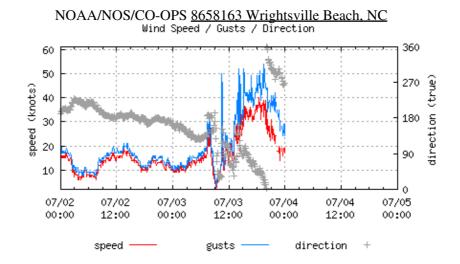
Last Observed Sample: 07/04/2014 00:00 (EDT) Water Temperature: 81.3° F Air Temperature: 75.7° F

NOAA/NOS/CO-OPS 8658163 Wrightsville Beach, NC Preliminary Water Level, relative to Mean Higher High Water (MHHW) 3.0 Height in Feet (MHHW) 2.0 1.0 0.0 -1.0 -2.0 -3.0 -4.0 -5.0 07/04 07/03 07/03 07/05 07/02 07/02 07/04 00:00 12:00 00:00 12:00 00:00 12:00 00:00 Predicted Tide (Obs-Pred)

Last Observed Sample: 07/04/2014 00:00 (EDT). Data relative to MHHW Observed: -1.80 ft. Predicted: -0.67 ft. Residual: -1.13 ft. Historical Maximum Water Level: Sep 25 2008, 2.81 ft. Next High Tide: 07/04/2014 00:25 (EDT), -0.64 ft.

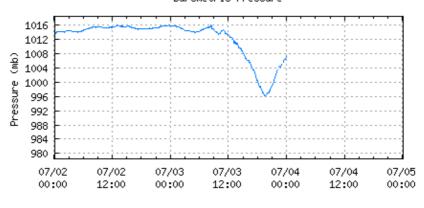
MHHW

Observed WL



Last Observed Sample: 07/04/2014 00:00 (EDT) Wind Speed: 19 knots Gusts: 29 knots Direction: 269° T

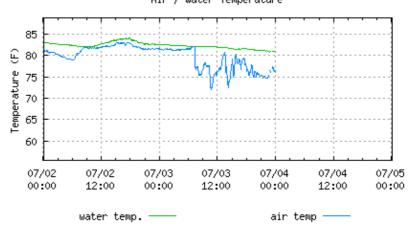
NOAA/NOS/CO-OPS <u>8658163 Wrightsville Beach, NC</u> Barometric Pressure



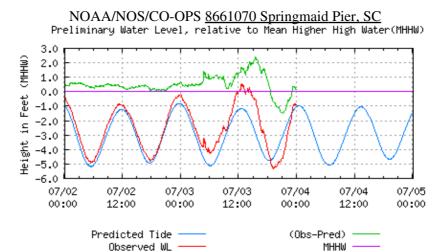
barometric pressure —— Last Observed Sample: 07/04/2014 00:00 (EDT)

Barometric Pressure: 1007.1 mb

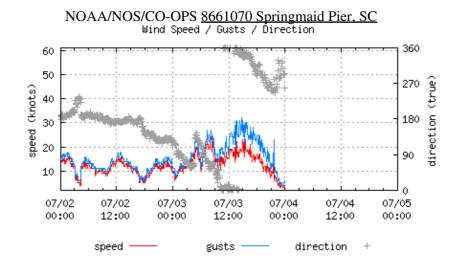
NOAA/NOS/CO-OPS <u>8658163 Wrightsville Beach, NC</u> Air / Water Temperature



Last Observed Sample: 07/04/2014 00:00 (EDT) Water Temperature: 80.8° F Air Temperature: 76.3° F



Last Observed Sample: 07/04/2014 00:00 (EDT). Data relative to MHHW Observed: -0.88 ft. Predicted: -1.03 ft. Residual: 0.15 ft. Historical Maximum Water Level: Jan 1 1987, 3.65 ft. Next High Tide: 07/04/2014 00:30 (EDT), -0.97 ft.



Last Observed Sample: 07/04/2014 00:00 (EDT) Wind Speed: 4 knots Gusts: 6 knots Direction: 258° T

Latest Water Level Observations on MHHW

Station ID	Station Name	Date/Time	Observed Water Level	Predicted Tide	Residual Water Level	24 Hour Maximum Storm Tide
8631044	Wachapreague, VA	07/04/2014 00:00 (EDT)	-0.94 ft	-1.00 ft	0.06 ft	-0.29 ft
8638863	Chesapeake Bay Bridge Tunnel, VA	07/04/2014 00:00 (EDT)	-0.27 ft	-0.76 ft	0.49 ft	-0.15 ft
8651370	Duck, NC	07/04/2014 00:00 (EDT)	-0.35 ft	-0.74 ft	0.39 ft	-0.32 ft
8652587	Oregon Inlet Marina, NC	07/04/2014 00:00 (EDT)	-0.23 ft	-0.24 ft	0.01 ft	0.37 ft
8654467	USCG Station Hatteras, NC	07/04/2014 00:00 (EDT)	-1.42 ft	-0.51 ft	-0.91 ft	0.02 ft
8656483	Beaufort, NC	07/04/2014 00:00 (EDT)	0.43 ft	-0.66 ft	1.09 ft	1.38 ft
8658163	Wrightsville Beach, NC	07/04/2014 00:00 (EDT)	-1.80 ft	-0.67 ft	-1.13 ft	0.59 ft
8661070	Springmaid Pier, SC	07/04/2014 00:00 (EDT)	-0.88 ft	-1.03 ft	0.15 ft	0.53 ft

Center for Operational Oceanographic Products & Services (CO-OPS) | National Ocean Service (NOS) National Oceanic and Atmospheric Administration | U.S. Department of Commerce